

[IN THE ABSTRACT:]

[The Abstract has been replaced as follows:]

ABSTRACT

A transmitter for a portable radio communication apparatus comprising a modulator having first port for inputting a baseband signal and a second port for inputting a local oscillator signal, and including means for rectifying the input local oscillator signal to provide a conductance waveform at a multiple of the local oscillator signal, and means for mixing the baseband signal with the conductance waveform at said multiple of the local oscillator signal frequency for up-converting the baseband signal to a radio frequency modulated carrier, the transmitter including means for controlling the gain of the modulator thereby to control the output level of the modulator.